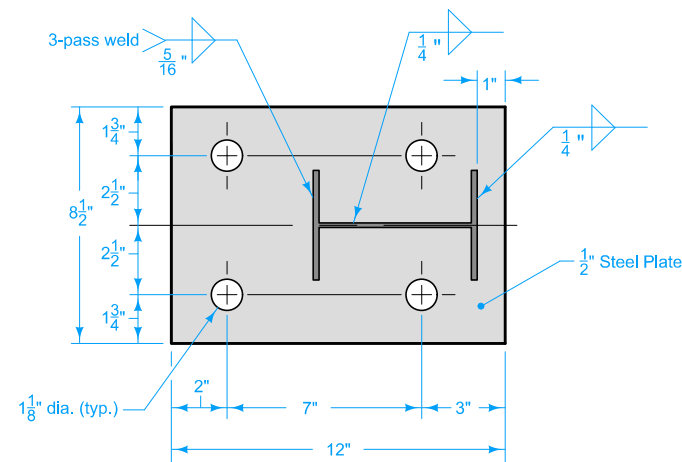
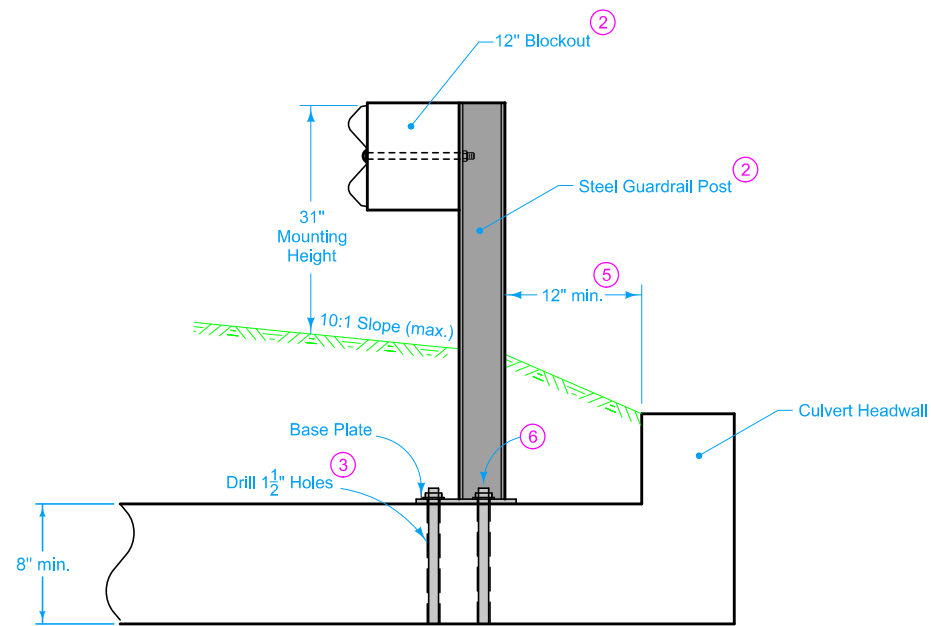


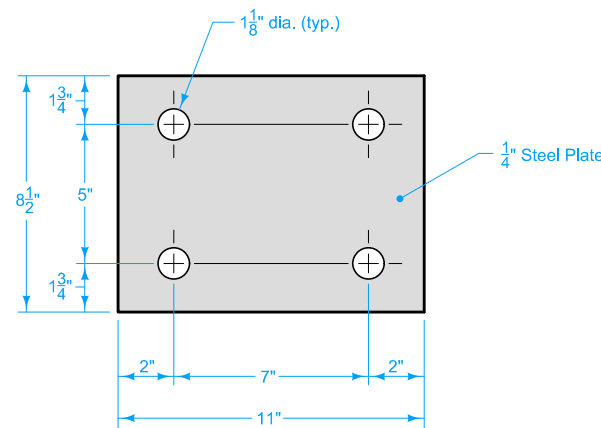
**TYPICAL SECTION
(Bolt Through Connection)**



BASE PLATE AND POST



**TYPICAL SECTION
(Epoxy Connection)**



BOTTOM PLATE

Install post adapter unit on top of box culverts or similar situations when standard post embedments are not possible. Not intended for use on intakes.

Contractor may elect to fabricate posts using a 6-foot post and adjusting in the field as follows:

- A. Saw off top end to proper length and drill new holes.
- B. Treat the sawed end and drilled holes with two coats of organic zinc rich paint containing at least 94% zinc dust. Ensure the surfaces to be treated are free of oil residues due to sawing or drilling.

The price bid for "Steel Beam Guardrail, Post Adapter Unit, BA-210" is full compensation for furnishing, assembling, and installing the adapter unit as shown. Quantity shown in the contract documents.

- 1 Bolt length equals slab thickness plus 2 inches. Use 2 - 2.5 inch washers per bolt.
- 2 Provide W6x9 or W6x8.5 steel guardrail post. Supply routed blockout or nail blockout to post in order to prevent twisting.
- 3 Drill holes using equipment designed to cut through concrete and reinforcing steel.
- 4 Grout spalling before placement of bottom plate using a grout consisting of equal parts by weight of Portland cement and concrete sand, mixed with sufficient water to form a paste.
- 5 Twelve inch minimum to end of top of culvert if no headwall is present.
- 6 Bolt length to provide a minimum of 8 inch embedment. Use 1 - 2.5 inch washer per bolt.

Possible Contract Items:

- Steel Beam Guardrail
- Steel Beam Guardrail, Post Adapter Unit, BA-210

Incidental to Adapter Unit:


- 1 - 12" x 8 1/2" x 1/2" ASTM A36 Steel Plate
- 1 - 11" x 8 1/2" x 1/4" ASTM A36 Steel Plate
- 4 - 1" ASTM A307 Hex Head bolts with one nut and two washers per bolt

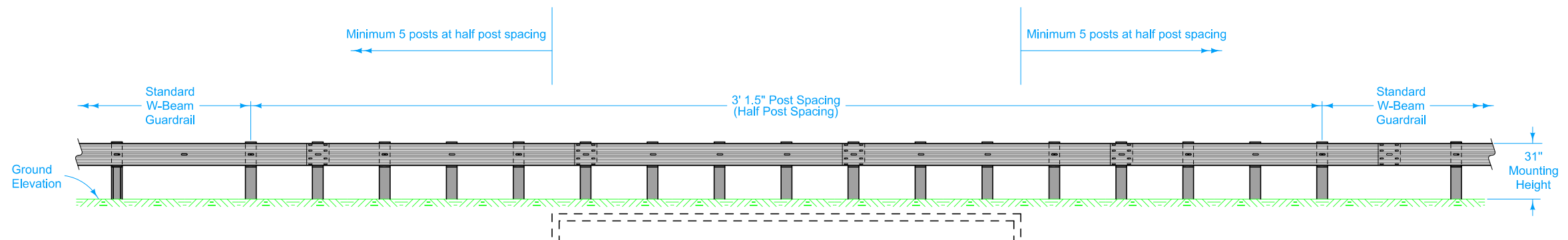
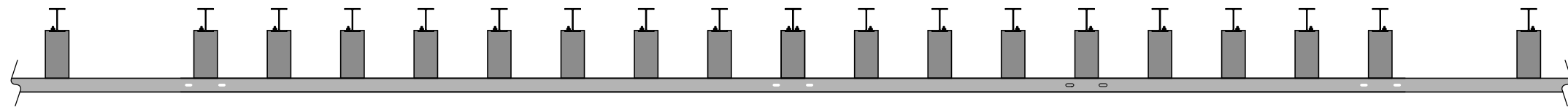
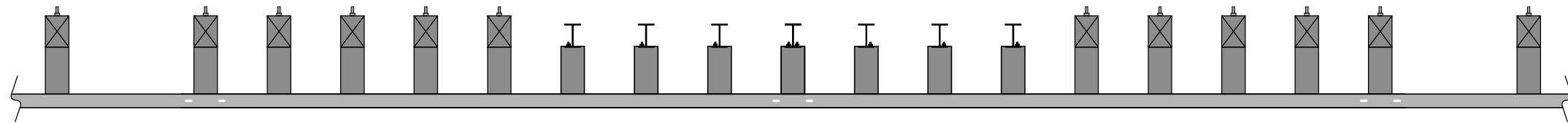
Incidental to Steel Beam Guardrail:

- W6 x 9 or W6 x 8.5 Steel Guardrail Post (variable length)
- 6" x 12" x 14" Blockout

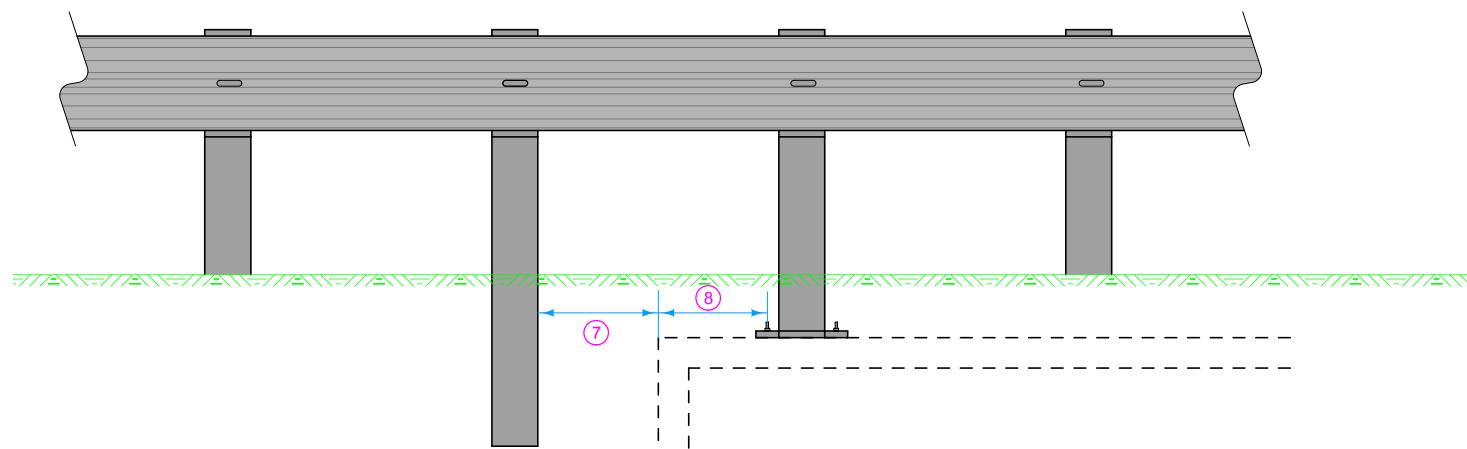
Possible Tabulations:

- 108-8A
- 108-8B
- 108-8C

IOWA DOT	REVISION	
	3	10-19-21
STANDARD ROAD PLAN	BA-210	
	SHEET 1 of 2	
<small>REVISIONS: Added Sheet 2. Added washers to circle notes 1 and 6. Increased offset to 12" in Typical Sections.</small>		
 <small>APPROVED BY DESIGN METHODS ENGINEER</small>		
GUARDRAIL POST ADAPTER UNIT		



- ⑦ Minimum 12 inches between post and edge of culvert.
- ⑧ Minimum 4 inches between edge of culvert and center of anchor.



 IOWA DOT	REVISION	
	3	10-19-21
STANDARD ROAD PLAN	BA-210	
SHEET 2 of 2		
<small>REVISIONS: Added Sheet 2. Added washers to circle notes 1 and 6. Increased offset to 12" in Typical Sections.</small>		
 <small>APPROVED BY DESIGN METHODS ENGINEER</small>		
GUARDRAIL POST ADAPTER UNIT		